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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,822	09/16/2003	Frank G. Hughes	08350.0676	1099

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EXAMINER
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CHANG, CHING

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/662,822	<b>Applicant(s)</b> HUGHES ET AL.	
	<b>Examiner</b> Ching Chang	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12/22/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7,11,13,15,16,18 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,11,13,15,16,18 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/2005 has been entered. Claims 2-6, 8-10, 12, 14, 17, 19-20 are cancelled as requested.

#### ***Claim Rejections - 35 USC § 112***

1. Claims 21-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More specifically, "to abut side surfaces of adjacent rocker arms " after " adapted " in claims 21, 24, and 27 is new matter.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wells et al. (US Patent 4,655,177).***

Wells discloses a cylinder head (12) for an internal combustion engine, the cylinder head comprising: a top deck (See Fig. 1); and at least one integrally cast rocker shaft pedestal (24) including a top surface, wherein the top deck is in a same plane as the top surface of the at least one rocker shaft pedestal (See Fig. 1); wherein the at least one rocker shaft pedestal includes a pair of opposed sidewalls adapted for correctly spacing adjacent rocker arms (42) on each side of the pedestal.

5. ***Claims 21, 24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Wells et al. (US Patent 4,655,177).***

Wells discloses a cylinder head (12) for an internal combustion engine, the cylinder head comprising a top deck (See Fig. 1) and at least one integrally cast rocker shaft pedestal (24), the pedestal comprising: a substantially flat top surface (part of 24) adapted to abut a flat (part of 36) of a rocker shaft assembly (10); wherein the top surface of the pedestal is in the same plane as the top deck (See Fig. 1).

Wells further discloses that the opposed outer side walls of the said pedestal have substantially flat portions (See Fig. 1). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the said flat portions of the pedestal to abut side surfaces of the adjacent rocker arms, since the use would provide a more compact engine, with properly aligned rocker arms.

6. ***Claims 13, 15-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (US Patent 4,655,177) in view of Nakamura (US Patent 4,505,236).***

Wells discloses an internal combustion engine comprising: a cylinder block; a cylinder head (12) having a top deck and at least one integrally cast rocker shaft pedestal (24, 36) including a top surface, wherein the top deck is in a same plane as the top surface of the at least one rocker shaft pedestal (See Fig. 1); and a rocker shaft (40) mounted on the at least one rocker shaft pedestal, the rocker shaft having a plurality of rocker arms (40) mounted thereon.

Wells discloses the invention as recited above, however, fails to disclose the rocker shaft includes at least one flat formed on an underside of the shaft adapted for mating with a top of the at least one rocker shaft pedestal.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) at least one flat formed on an underside of the shaft adapted for mating with a top of the at least one rocker shaft supporting member (98), in which the at least one rocker shaft supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a

top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the flat mating surface on the rocker shaft and the spacing steps on the opposed outer side walls of the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal in the Wells device, since the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

**7. *Claims 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (as applied to claim 1) in view of Nakamura (US Patent 4,505,236).***

Wells discloses the invention, however, fails to disclose each sidewall having a spacing step adjacent a top of the pedestal, which spacing steps are adapted for correctly spacing adjacent rocker arms on each side of the pedestal, in which each sidewall includes a second step formed beneath the spacing step.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) supported by a supporting member (98), in which the supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the mating relations between the rocker shaft and the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal, to include a spacing step and a second step on each opposed sidewalls in the Wells device, since the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

8. ***Claims 22-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (as applied to claims 21 and 24) in view of Nakamura (US Patent 4,505,236).***

Wells discloses the invention, however, fails to disclose each sidewall having a spacing step adjacent a top of the pedestal, which spacing steps are adapted for correctly spacing adjacent rocker arms on each side of the pedestal, in which each sidewall includes a second step formed beneath the spacing step.

The patent to Nakamura on the other hand, teaches that it is conventional in the engine rocker shaft support art, to utilize a rocker shaft (128) supported by a supporting member (98), in which the supporting member includes a pair of opposed sidewalls, each sidewall having a spacing step adjacent a top of the supporting member, which spacing steps are adapted for correctly spacing adjacent rocker arms (130) on each side of the supporting member, in which each sidewall includes a second step formed beneath the spacing step (See Fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the mating relations between the rocker shaft and the rocker shaft supporting member as taught by Nakamura, to modify the mating geometric relations between the rocker shaft and the rocker shaft pedestal, to include a spacing step and a second step on each opposed sidewalls in the Wells device, since the use thereof would provide a more compact engine with a proper alignment on the rocker arms.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 7, 11, 13, 15-16, 18, and 21-27 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

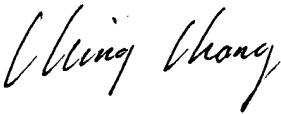
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in cursive script, appearing to read "Ching Chang".

Ching Chang